

intended to be read in view of such assumptions. If these assumptions are in error, Applicant respectfully requests notification prior to entry of the present amendments and remarks.

REMARKS

Applicant respectfully traverses the rejections with the following remarks in view of the amendments made to claims 1, 7 and 11. A marked up copy of the amended claims are attached hereto as Appendix A.

Bonora discloses a human guided mobile loader stocker for assisting in the transport of standardized mechanical interface (SMIF) pods in a semiconductor manufacturing operation. Bonora describes an intelligent data card (232-1) mounted to a side of a pod (18-1). The pod mates to a processing station (12) which includes means (236) for communicating with the data card (232-1). The communicating means (236) is disclosed as including a photosensitive transistor or other photodetector which responds to data transmitted by light emitting diodes or other communicating means.

The present invention is concerned with an apparatus for visually conveying information directly to a human operator by way of one or more discrete light emitters (Applicant's Specification paragraph 0018). The manner of visually conveying information to the operator is without intervention by the operator and in accord with continuous or intermittent activation states of the light emitter (Applicant's Specification paragraphs 0019-0020).

The Office Action appears to equate the optocoupling (communication of data card information from an LED to the photosensitive transistor or other photodetector of the communicating means) to the visual conveyance of information from the data card directly to a human operator. Applicant has amended independent claims 1, 7 and 11 to further distinguish the present invention over the apparatus and methods disclosed in Bonora.

Clearly, the apparatus and methods disclosed in Bonora do not anticipate Applicant's claimed invention. Bonora is clearly concerned with optocoupling of data card information to another piece of production processing equipment (i.e. processing station). Nowhere does Bonora disclose that the LED(s) disclosed in Bonora are for any information conveyance directly to a human operator nor does it suggest any such use or adaptation.

Based on the above, it is respectfully submitted that amended claims 1, 7 and 11 are in a condition for allowance, which allowance is earnestly solicited. With respect to the remaining claims, all of which depend from one of claims 1, 7 and 11, the fact that they claim additional elements or limitations also renders them allowable over Bonora, which allowance is earnestly solicited.

Respectfully submitted,

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APPENDIX A**VERSION OF THE CLAIMS WITH MARKINGS TO SHOW THE CHANGES**

Please amend claims 1, 7 and 11 as follows:

1. (AMENDED) Apparatus for visually conveying information to a human operator in a manufacturing process comprising:

a container for transporting work in progress used in the manufacturing process;

an electronic data card that follows the container through at least a portion of the manufacturing process, said electronic data card including a microcomputer and containing data related to one or more of the manufacturing process and related equipment; and,

at least one light emitter associated with the electronic data card and operable in response to a set of instructions executed by said microcomputer to visually convey predetermined information directly to a human operator about one or more of the manufacturing process and related equipment.

7. (AMENDED) An electronic data card for storing predetermined manufacturing process and related equipment information, said electronic data card including a microcomputer, an alphanumeric display and operator interface buttons for operator retrieval of stored manufacturing process and related equipment information, the improvement comprising:

at least one light emitting diode conditionally illuminated in accordance with a set of instructions executed by the microcomputer to perform at least one conditional check upon at least one of said stored manufacturing process and related equipment information, wherein the

result of said at least one conditional check is visually conveyed for viewing by a human operator by the illumination condition of said at least one light emitting diode.

11. (AMENDED) A method of visually conveying critical information associated with a production lot of work in progress wafers in a microchip fabrication process comprising the steps:

providing an electronic data card capable of storing information, executing a set of instructions, and having at least one controllably illuminated LED;

associating said electronic data card with said production lot throughout at least a portion of the fabrication process;

storing predetermined information corresponding to the production lot on said data card;

providing the electronic data card with a set of executable instructions for performing conditional checks on said predetermined information; and,

controlling the illumination of said at least one LED in a predetermined manner in accordance with results of said conditional checks on said predetermined information, whereby the manner in which the LED is illuminated visually conveys critical information associated with said production lot related to said predetermined information directly to a human operator.